

ORIGINAL
(Red)SUBJECT: REVIEW OF DRAFT RED CLAY CREEK REPORT

FROM:

HARRY T. DAW, EE12/8/87

TO:

CERCLA REMOVAL ENFORCEMENT (3HW14)KIM HUMMELENVIRONMENTAL PROGRAMS SECTION (3ES12)

I HAVE REVIEWED THE REPORT ON TOXIC SUBSTANCES
IN THE RCC THAT WAS PREPARED BY WESTON FOR DE DNREC. MY REVIEW
ONLY RELATED TO THE ISSUE OF PCBs IN THE CREEK.

OVERALL ALL I DID NOT HAVE MANY COMMENTS AT ALL,
HOWEVER I AM CONCERNED ABOUT LIMITED AMOUNT OF ATTENTION
PAID TO THE PCB PROBLEM IN THE AREA. THIS SEEMS ODD
SINCE THE PCB ISSUE WAS PRIMARILY RESPONSIBLE FOR INITIATING
THIS CONCERN FOR CONTAMINANTS IN THE RCC.

THE COMMENTS I MADE ARE ATTACHED. IF I CAN
BE OF FURTHER ASSISTANCE PLEASE CONTACT ME AT X6680

ATTACHMENT.

AR100373

WESTON

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(Red)

ADDITIONAL ZONE 3 PCB DATA:

DATE	LOCATION	COMPOUND	ppb
3/30/83	sediment adjacent to NVF	A1248	9300
5/9/83	sediment - NVF discharge swale	A1248	400000
5/9/83	sediment 20' u.s. of NVF	A1248	2000
5/9/83	NVF effluent analysis	A1248	0.26
5/9/83	sediment d.s. of NVF	A1248	200000
5/9/83	sediment d.s. off west South culvert	A1248	15000
4/18/84	sediment d.s. of NVF	A1248	6300
4/18/84	water d.s. of NVF	A1242	2.4
4/18/84	sediment Kennett Square STP swale	A1248	200
		A1260	86
6/5/84	sediment at South street	A1248	8400
6/5/84	soil - Nozensky junkyard	A1260	410
	<i>what is the Nozensky swale?</i>	A1254	500
6/5/84	sediment Nozensky swale	A1254	490
1/22/85	sediment near w. Branch confluence	A1248	41000
1/14/86	"	A1248	20000
4/28/86	water near w. Branch confluence	A1242	1.8
4/29/86	"	A1242	2.2

ADDITIONAL ZONE 5 PCB DATA:

3/30/83	sediment - Kaolin rd. bridge	A1248	18
4/18/84	sediment near route 82	A1242	30
6/5/84	sediment d.s. of South st.	A1248	190

ADDITIONAL ZONE 6 PCB DATA:

1970	water	A1248	15
4/18/84	sediment near route 82	A1254	0.17

ADDITIONAL ZONE 7 PCB DATA:

3/30/83	sediment - Marshall's bridge	A1248	35
5/2/85	NVF stateline landfill	trace of PCB's	

The figure showing average sediment concentrations clearly points to the NVF tributary (zone 3) as the number one source of PCB contamination in the Red Clay Creek system. A much smaller contribution is found on the East Branch.

The additional data for zone 3 identifies several locations where PCB compounds have been found in sediment samples. Along with the Kennett Square STP discharge swale and the Nozensky junkyard, the data points to the NVF discharge as the primary source. In 1983 a concentration of 400 mg/kg (400,000 ppb) was reported from the sediments in this swale. *a much higher level of 11,000 ppm was reported by EPA FTS in 1986.*

This figure also demonstrates the effects of the pollution from zone 3 on the Red Clay system. Zone 4 which is immediately downstream of the NVF tributary on the West Branch has an average



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Reviewing all the available data has resulted in identifying the following data gaps:

es 1, 2, 4 and 5

- A minimal number of readings were observed for reported parameters. Many conventional parameters such as temperature and dissolved oxygen were not reported.

ne 3

- The NVF tributary in Kennett Square, was excluded from our conventional pollutant analysis due to insufficient data. Reported data for Bucktoe Creek was also excluded from the summary as it artificially reduced the concentration of parameters in the West Branch.

GOOD, I + 3 2000
there is little data
however, it is not
correct for tributary

ne 7a

- STORET data is available for Zone 7(a), although the station has not been operational since 1977. The data for Zone 7(a) includes observations for a broad range of parameters, however, there are not many observations reported.

In summary, the minimal amount of data available for the Pennsylvania reaches of Red Clay Creek do not provide a comprehensive summary. An ongoing sampling program would be helpful in an accurate assessment of Pennsylvania's contribution to contamination in the Red Clay Creek.

1.2 Biological Characteristics

- Fish tissue data over time or between stations is often incomparable due to: (1) Difference in species, (2) Type of sample (whole, fillet).
- There is a lack of comparable macroinvertebrate data between Pennsylvania and Delaware stations: (1) Pennsylvania data was collected in autumn, and Delaware data in spring; (2) Different sampling techniques were used; (3) There is a lack of comprehensive coverage. Overall there were not enough stations.
- There is a minimal amount of fish diversity data collected on Red Clay Creek. Much of the data that is available is incomparable due to the use of different sampling techniques.